



## **SRS Citizens Advisory Board**

### **Combined Committee Meeting**

#### **Meeting Summary**

November 12, 2002

Aiken Conference Center

Aiken, SC

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The following were in attendance at the Savannah River Site (SRS) Citizens Advisory Board (CAB) Combined Committee Meeting held November 12, 2002, at the Aiken Conference Center, Aiken, S.C.

#### **CAB Members**

David Adcock

Judy Barnett

Nancy Ann Ciehanski

Ann Dalton

Gerald Devitt

Mel Galin

Perry Holcomb

J.G. Long

Dorene Richardson

Murray Riley

Heather Simmons

Jean Sulc

Bill Voge

Wade Waters

Gloria Williams-Way

Bill Willoughby

#### **Stakeholders**

Lee Poe

Karen Patterson

Sam Booher

Carlos Garcia

Kelly Hunter

Tiajoana Cochanauer

Russ Messick

Harold Rahn

Malcom Page

#### **Regulators**

Keith Collinsworth, SCDHEC

Chuck Gorman, SCDHEC

#### **DOE/Contractors**

Tom Heenan, DOE

Charlie Anderson, DOE

Becky Craft, DOE

Karen Hooker, DOE

Gerri Flemming, DOE

Thomas Johnson, DOE

Harold Conner, WSRC

John Pescosolido, DOE

Kevin Hall, DOE

Alice Doswell, DOE

Bill Brasswell, DOE

Troy Donahue, WSRC

Howard Walls, WSRC

Teresa Haas, WSRC

Jim Moore, WSRC

Lyddie Broussard, WSRC

Dawn Haygood, WSRC

Kelly Way, WSRC

Paul Sauerborn, WSRC

Helen Villasor, WSRC

Ron Malanowski, WSRC

Gerald McLane, BSRI

Susan Dyer, BSRI

Casey Knapp, BSRI

Peter Hudson, BNFL

The following SRS Citizens Advisory Board members were absent: Meryl Alalof, Becki

Dawson, Ken Goad, William Lawrence, Jimmy Mackey, Lola Richardson, Marty Stringer, and Carolyn Williams. Mike Schoener facilitated the meeting. Ralph DiSibio, Washington Group International Energy & Environmental Division, provided introductory remarks and offered his appreciation of the SRS CAB. He addressed various questions regarding the origin of the Washington Group and different aspects of the organization.

### ***WSRC Reorganization***

Harold Conner, Westinghouse Savannah River Company Chief Operations Officer, presented the WSRC reorganization to align resources with accelerated cleanup. He discussed the following new structure:

Chief Closure Officer	Area Closure Projects, F Area Closure Projects, Facility Disposition Projects, Soil and Groundwater Closure Projects and Liquid Waste Management Projects
Chief Operations Officer	Solid Waste & Infrastructure, NN, Nuclear Materials Management, Defense Programs
Field Support Services	Environment Safety & Health, Security Services, Technical & Quality Services, Business Management Services, Human Resources
Project, Design and Construction Services	Design Services, Construction & Startup Services, Project Management Services

Mr. Conner noted that Bill Johnson is the Acting Chief Closure Officer, Laurie Hollick is acting manager of Field Support Services and Bill Elkins is the acting manager of the Project, Design and Construction Services. He further discussed the breakdown of activities within each of the four divisions and noted that various functional areas will report to the Office of the President. Board members questioned plans for closure and end-state planning. Sam Booher requested a detailed map of the industrial zone. Board members were also interested in reviewing the end state plan, which Mr. Conner stated should be available in 4-6 weeks.

### ***Strategic Initiatives Committee Report***

Mel Galin, Chair, introduced John Pescosolido, Kevin Hall, Charlie Anderson, Tom Heenan and Alice Doswell for presentations on the budget and PBIs. Mike Schoener, CAB facilitator, requested that since these presentations were all tied together, all questions be held until the presentations were complete and then all the presenters would approach the front to answer questions.

### ***Fiscal Year 2003 Budget:***

John Pescosolido, Chief Financial Officer Department of Energy (DOE), stated that he would review the FY03 budget as well as give a perspective on the FY04 budget. The budget review would tie into the PBIs presentations to follow since the budget and incentives were linked.

Mr. Pescosolido noted that Congress has not yet acted on the FY03 budget. DOE is working under a continuing resolution with is good until November 22, 2002. It is expected that with the elections just over and a lame duck session only meeting approximately one week, the

department will probably be working under a continuing resolution through January and February.

Mr. Pescosolido reviewed different funding possibilities under the continuing resolution. The original Presidents Base Budget for Environmental Management (EM) was \$962 million. The expected budget with EM Cleanup Reform Appropriations is \$1,178 million. The House version of the budget passed with only a shortage of \$8 million. The Senate version however, had a deficit of \$240 million. The worse case scenario expected is \$1,070 million or a \$100 million deficit.

Under the continuing resolution, the site is required to work at about \$8 million per month less than planned. All work under the FY03 plan has been initiated assuming full funding would be received by about the end of February. If the site doesn't get full funding at that point, we will have to re-evaluate the FY03 work plan and determine what work we will be able to perform and what might have to be deferred depending on the final budget amount we receive.

PBIs have been agreed to among DOE and Westinghouse Savannah River Company (WSRC) with base, stretch and super stretch goals. These goals allow WSRC to proceed on 100 percent of the workplan. There is no funding in the contracts for the super stretch goal but through efficiency and good management practices, they can earn funds for the added work. For the base goal, the contractor must meet the incentive to receive the incentive funding. If the incentive is not met, then the contractor receives no funding.

For FY04 and beyond, the draft budget has been sent to DOE-Headquarters (HQ). EM is proposing a new appropriations and Project Baseline Summary (PBS) structure for FY04 which will by and large be transparent to SRS.

The funding requirements exceed the resources available for all years, which is nothing new. The contracting strategy is to close the gap. Achieving results is the key to maintaining the budget at levels needed for the accelerated clean-up vision. Receiving funding will reward the sites that get results. Sites that don't get results will be penalized by a reduction of funds.

Mel Galin thanked Mr. Pescosolido for the presentation and requested that the updates continue at the committee and CAB levels.

#### **Performance Based Incentives:**

Kevin Hall, DOE Nuclear Materials Management Division (NMMD), presented the PBIs for the NMMD program for FY03 - 06. Mr. Hall stated that at the top level the Presidents Management Agenda is to get results for the dollars spent. Jessie Roberson, DOE, emphasized this in the Top-to-Bottom review. For Nuclear Materials, the incentives are in three categories: stabilization, disposition and storage. The NMMD PBI's are as follows:

- Complete construction of the FB-Line Packaging and Stabilization Project. Project completion enables plutonium (Pu) stabilization and packaging to meet 3013 standards.
- Complete charging/disposition of SRS residues. Disposition of Pu bearing materials through dissolution, packaging, or disposal.

- Begin converting neptunium (Np) solution to oxide in HB-Line Phase II. The first batch of Np solution will be transferred from H Canyon storage to HB-Line receipt tank following DOE authorization.
- Complete converting Np solution to oxide in HB-Line Phase II. Np oxide will be packaged into appropriate storage container and removed for interim storage.
- Complete charging Mk-16/22 assemblies to the H Canyon dissolver. Disposition all remaining irradiated Mk-16/22 assemblies from prior reactor operations.
- Complete bagless packaging of Rocky Flats Experimental Technology Site (RFETS) classified metal. Certain RFETS Pu metal items must be repackaged for storage.
- Complete charging Sterling Forest Oxide (SFO) cans to the H Canyon dissolver. Disposition of remaining SFO material through H Canyon and currently stored in Receiving Basin for Offsite Fuel (RBOF).
- Charge 30% of the remaining Table 5.2-1 and miscellaneous fuels/targets. Disposition a wide variety of miscellaneous fuel/targets as time and processing capacity permit.
- Support certification/recertification of 9075 shipping containers. Disposition a wide variety of miscellaneous fuel/targets as time and processing capacity permit.
- Americium/Curium disposition. Complete the transfer of the Americium/Curium material to HLW.
- Complete the commitments identified in the proposed rollback initiatives for calendar year 2002-2002, NMM-PRG-2001-0675, as scheduled or ahead of schedule. Provides for the rollback of high contamination areas to contamination areas, contamination areas to radiological buffer areas, and eliminate some airborne radioactivity areas.
- F Area accelerated shutdown – depleted uranium oxide. Requires removal of depleted uranium oxide from two buildings onsite and shipment for offsite disposition.
- Accelerated deactivation of F Canyon and FB-Line. Contractor must complete operational and deactivation activities in F Canyon and FB-Line. – FB-Line Package and Stabilization Operations, - 3013 Surveillance Project, - FB Line Deinventory, - F Area Deactivation.
- NMMD FY03 key mission activities. Requires execution of unfunded work activities totaling approximately \$17.8 M (direct).
- Receive, store and transport Special Nuclear Materials (SNM) and Spent Nuclear Fuel (SNF) in support of commitment schedules, and deactivate RBOF. Contractor must receive offsite SNM and SNF, and must deinventory and deactivate RBOF.

Charlie Anderson, DOE HLW, presented the HLW PBIs stating that the three areas in HLW are disposal, salt waste and facility closure. The HLW PBIs are:

- High Level Waste (HLW) Tank System Closures. Complete operational closures of tank 18 and 19.
- HLW Authorization Basis Upgrade. Development and implementation of new Tank Farm 10CFR830 Authorization Basis.
- HLW Low Curie Salt Waste Disposition. The removal, treatment, and disposal of low activity salt waste.
- Actinide Processing Facility. Provide capability to process Low Curie Salt with higher actinide content.
- Sludge Batch Preparation. Ensure adequate feed to support continuous HLW system operation (canister production).

Tom Heenan, DOE Environmental, Science and Technology, indicated his three focus areas were to get rid of the waste, don't receive any more waste and ship the waste we have. The PBIs are:

- Reach steady state operations in the Low Level Waste (LLW) program. Reduce the volume of LLW in storage.
- Reach steady state operations in the Mixed Waste (MW) program. Reduce the volume of treated and untreated MW in storage.
- Reach steady state operations in the Hazardous Waste (HW) program. Reduce the volume of HW in storage.
- Reduce Newly Generated Transuranic (TRU), LLW, MW and HW. Implement waste minimization methods to reduce waste generated.

- Accelerate TRU Waste disposal. Reduce inventory of drummed TRU waste.
- Cost effective/risk-reducing alternative to incineration for PUREX Waste. Treat and dispose of legacy PUREX.
- Accelerate and/or complete remediation of high-risk waste sites. Achieve or accelerate outcomes that have significant risk reduction benefits.

Alice Doswell, DOE Health, Safety and Technology Support, stated that a year ago there was no decontamination and decommissioning (D&D) program. With the emphasis in cleanup, there is an effort to reduce the site footprint. The PBIs are:

- Footprint reduction. Demolition and removal of inactive facilities for which there is no planned reuse.
- Decommissioning. Demolition and removal of inactive facilities in T, D, and M-Areas.

Some of the comments to questions asked during the discussion period were as follows:

- The draft End State Plan should be available in four to six weeks.
- In answer to the question what happens if the contractor doesn't accomplish the work in the PBI because of permits or licenses not received, it was stated that PBI's do address Government Furnished Services and assumptions. However, the PBI's are about results, no excuses. The contractor has an incentive to do his homework and get the permits and licenses initiated in time for completion of work.
- During discussions, there was confusion concerning additional work required at SRS on plutonium coming from Rocky Flats. The CAB was assured that the material at Rocky Flats was stabilized at Rocky Flats. When the material is placed in a 9075 container, nothing else has to be done to the material but store it. So SRS does not have to do anything with the material except store it.
- If the Salt Program were not funded, it would delay the disposition of salt. There is no intent not to fund the process. There is also no intention to go direct disposal. If we go direct disposal, a new facility would have to be built for the high curie material.
- The current PBI's were just re-looked at and changed based on the Paul Golan visits and discussions.
- While the presenters didn't emphasize risk reduction, there is a direct connection between risk reduction and the PBIs. An example of risk reduction is the closure of tanks in HLW.
- F Canyon will be put in a safe condition in case it may be needed in the future. A Facility Disposition Division (FDD) project manager is working with the F Canyon people to make sure a smooth transition exists.

### ***Environmental Restoration Committee Report***

#### ***SRS Carolina Bays – Update:***

Chris Barton of the USDA Forest Service introduced himself to the audience and stated that a group of drained Carolina bay wetlands at the SRS are being restored to try to achieve their original make-up of plants and wildlife. Mr. Barton stated that the formation of Carolina bays is still a matter of scientific discussion however, information to date does not endorse the concept of a meteor shower as the way these formations came to be. Mr. Barton indicated that they were more likely formed in response to wind and water over several thousand years. Another interesting note is that the bays serve three primary purposes, flood control and water storage, water quality enhancements (improves water quality) and provides habitat for plant and animal life. Mr. Barton stated that as a part of the restoration project, data were collected to document the conditions of the bays before the restoration effort began on each Carolina bay. Mr. Barton continued his presentation by stating that some drained bays may restore themselves without influence by man whereas others need man's intervention.

The objectives of the project are as follows:

- Establish replicated sets of restored Carolina bays and associated upland buffer
- Determine if restored systems are moving toward planned endpoints by assessing trends and rates of change in biotic and abiotic metrics and comparing these to control or undisturbed bays
- Assess how land management practices influence animal and plant species or communities in the bays
- Determine if planting tree and/or herbaceous species is a necessary management technique for the reestablishment of desired wetland species.

Four Treatment Designs were deployed:

- Pine savanna perimeter with a forested interior
- Mixed Pine/Hardwood forest perimeter with Herbaceous interior
- Mixed Pine/Hardwood forest perimeter with Forested interior
- Pine savanna perimeter with Herbaceous interior

The primary monitoring tasks for the project are:

- Soils
- Hydrology
- Vegetation
- Herpetofauna
- Avifauna
- Invertebrates

Mr. Booher requested that he receive a list of all known bays located on SRS property. Mr. Booher also asked if this was a five-year study, would all data collection cease at that time. Mr. Barton stated although the project was slated for five years, that the Forest Service would continue to collect pertinent data beyond that time frame. Mr. Barton stated that in most cases the bay vegetation would come back on its own, however to speed the recovery process they bring in some vegetation from other bays. Mr. Booher stated that he would like to see all bays restored. Bill Willoughby stated that restoring all the bays would create a mosquito problem as before and the likelihood of disease would be present. Dorene Richardson ER Committee Vice Chair thanked me Barton for his presentation.

#### ***Purge Water Reduction at the Savannah River Site:***

Casey Knapp stated that the Purging requirement is to purge 2-3 well volumes and obtain stable water quality parameters before a sample can be taken. Prior to Fiscal Year (FY) 98, SRS produced more than 290,000 gallons of purge water a year from 1,100 wells. Ms. Knapp pointed out that the challenge was how to reduce purge water production per sampling event without compromising sample analysis reliability. The results looked for a data management tool to evaluate and identify wells requiring purge water special handling. Currently 177,000 gallons of purge water per year from 430 wells require special handling. Ms. Knapp stated that all the above prompted the need for a Purge Water Management System (PWMS), and in 1997 SRS designed a pilot program for tank deployment with the South Carolina Department of Health and Environmental Control (SCDHEC). This pilot ran from FY97 to FY01 including the following:

- Quarterly reports and status presentations provided to SCDHEC
- Special studies conducted and design changes made during pilot program

- Establish team approach with SCDHEC for development of PWMS program
- Developed Pilot Program for Tankless deployment with SCDHEC in 2002
- Developments allow for two applications – Tank and Tankless

Ms. Knapp stated that over the last several years there have been three evolutions to the Tank designs that have proven successful in handling of purge water. Each design change provided a reduction in cost of the unit and time to sample the well. Ms. Knapp turned her attention to the next generation of the PWMS project, which is a tankless system. This tankless design works as follows:

- Purge water stored within the well casing
- Packer installed above the screen zone
- Packer inflated before sampling event and deflated following the event
- Units installed in wells with sufficient storage space within the casing

The accelerated deployment plan recognizes 112 wells have received tank units by the end of FY02, a 3 well tankless pilot program in FY02-03, and 82 wells are proposed to receive tankless units in FY03.

As a technology exchange, 2 tankless prototypes were installed in FY00 at Lawrence Livermore National Laboratory (LLNL), appropriations from DOE-HQ for "tailored" tankless design and pilot study. From this successful technology exchange, LLNL installed an additional 4 tankless units.

Ms. Knapp concluded with the path forward, which is to complete tankless pilot program and obtain regulatory approval for site-wide tankless deployment, to qualified wells, and continue investigation of innovative approaches to reduce or eliminate purge water.

Perry Holcomb was concerned about the amount of solids that might be left in the purge water tanks after returning the water back to the well. Ms. Knapp stated that there was very little solids left in then tank due to the slow pumping technique used when sampling the well.

Karen Patterson asked about deploying this technology to other sites, and Ms. Knapp was not familiar with any commercial deployments of the PWMS, but did mention that PWMS has been presented at many DOE conferences and has been successfully deployed at LLNL.

### ***Long Term Stewardship Committee Report***

#### ***Results of the SRS Former Worker Health Study:***

Mel Galin, SI Committee Chair, introduced Dr. David Adcock, a member of the CAB, to discuss the results of the SRS former worker health study.

Dr. David Adcock stated that this effort was started in 1997 and is being worked on by the University of South Carolina (USC) and the Medical University of South Carolina (MUSC). The study is independent of the DOE. The purpose of the study was to understand the exposure effects and current health state of former workers of SRS. Information on the study is updated

every two weeks and can be found on the website: [www.srsformerworkers.org](http://www.srsformerworkers.org). The project can be contacted toll free at (888) 286-2588.

The criteria for a worker to be included in this study are that the worker did work at SRS but doesn't now. Due to the limited budget, it was decided that the study would focus on retired workers. The retired worker would have the longest site exposure plus there would be a longer elapsed latent period. A needs assessment was developed to verify to the National Institute for Occupational Safety and Health (NIOSH) that a study was needed. Out of a total of 24,000 possible subjects, over 1300 workers have been examined. Another advantage of the selected workers was that they all live reasonable close to the SRS.

It was noted that the selection of the study group was purposely skewed to try to determine the most significant health problems associated with the SRS. Records of deceased workers were not obtained, but it was acknowledged that studying the cause of death for deceased workers would be useful in eliminating the possibility that work related exposures resulted in premature death.

The number of self-reported workers concerned with radiation was 57 percent. The total number of workers with more than 20 rem dose exposure was 178 or about 14 percent. Some other results were: material hearing impairment in 69 percent, chest radiograph results – pleural abnormalities were present in 15 percent, lung tissue abnormalities were present in 19 percent, abnormal pulmonary function results were obtained in 57 percent, beryllium lymphocyte sensitization was shown in only 1.4 percent, arthritis (self-reported) in 40 percent. The prevalence of cardiovascular disease was high but that is also true in the general population.

The health problem results of the study indicate that some hearing and respiratory problems can be attributed to work related exposures. Cancer related health problems for the SRS worker are at or below the average of the general population.

### ***Geography Information System (GIS):***

Nancy Ann Ciehanski, LTS Committee Chair, introduced Gerald McLane and Susan Dyer to give the presentation on the GIS system.

Ron Malanowski, WSRC, Manager of the Environmental Restoration (ER) Integrated Operable Units (IOU) provided an overview of why the GIS project being presented was developed for the ER IOU's during 1998 –1999. The project is constantly being improved and updated, it includes stream/river data and information from ER waste units, past releases, current outfalls and has the capability to predict areas of potential future impacts in site streams and floodplains.

Gerald McLane, BSRI, and Susan Dyer, WSRC, gave an overview of the total capabilities of the GIS system. From a wealth of geographic and hydrogeological data (aerial photos, remote sensing, topographic, hydraulic, etc.) they are able to key in on potential contaminant sources, migration pathways, and potential areas of impact. Media covered by the system are fish, game, sediment, soils, sediment/soils and surface water. By pointing to a particular area, they can bring up the data relevant to that area. The data and information can be viewed and evaluated by IOU, by media, by receptor, by specific location, and or by analyte. Data can be automatically screened against risk benchmarks for both human and ecological receptors. Human health



receptors include subsistence fisherman, recreational fisherman, adolescent trespasser, on-site worker, potential industrial worker and potential resident.

Some of the areas have more data available than other areas of the site. To keep the data current and accurate, the data and information is updated annually. The database includes the definitive and screening level data collected by ER and others only after they have reviewed and issued it. This data is accessible to everyone on site as well as the regulators and public.

There are over 3 million analytical records in the GIS project. Examples of reports and information that can be generated are data reports, statistical summary reports, analyte scatterplots, ecology views, hydrology maps, landuse maps, wildlife literature surveys, habitat maps and aerial photos. In some cases, additional data and written summaries are available by hotlinks. Examples of each were shown.

The site of new facilities is not included because the actual location of those facilities is still under review. DOE has supported and funded the GIS system. As new information is needed or other SRS organizations identify GIS needs, more funding may be required. This system is available for use in the End State Plan if needed.

#### ***Waste Management Committee Report***

Bill Willoughby welcomed those in attendance and updated the group on several issues. He offered the committees copies of the article "Managing the Environmental Legacy of U.S. Nuclear-Weapons Production" by Kevin Crowley and John Ahearne from the magazine *American Scientist*. The copies left on the table were all taken, but committee members could request a copy by calling Kelly Way on (803) 208-3224.

#### ***Recommendation #152***

Peter Hudson, Solid Waste Division, BNFL, made a formal presentation to close Recommendation #152. He stated that the Waste Management Committee (WMC) had requested a response to the recommendation in order to move the recommendation status from pending to closed. The recommendation requested that Savannah River (SR) verify to the CAB in writing its plan to blend the PUREX aqueous waste into the Saltstone feed as soon as practical after the Saltstone Facility is restarted, and that the process be targeted for completion by the end of FY03. Also, SR was to provide an updated schedule of planned activities on treating the PUREX organic waste by direct stabilization by August 27, 2002. Mr. Hudson included the DOE response letter from Greg Rudy, DOE-SR site manager, in his presentation.

In addition to this written response, the DOE has offered a Performance Based Incentive (PBI) to dispose of the aqueous PUREX waste by September 30, 2003. This PBI is the driver for reaching this goal. Also, DOE has offered another PBI to treat and dispose of 100 percent (stretch case) of the organic PUREX waste stream by September 30, 2006 instead of September 30, 2009.

When Mr. Holcomb asked about DHEC and their stance on land disposal restrictions, Mr. Willoughby informed the group that Solid Waste representatives would cover this at the next CAB meeting.

Mr. Moniak asked about Mr. Hudson's aerial photos and was assured they were not sensitive information. He then stated that Mr. Hudson's comment on the financial gain achieved from the PBI's could possibly undermine the safety culture in place at SRS. Mr. Pope answered that DOE's objective in offering these incentives to WSRC was to reduce the risks on the site. Communication plans are in place, and communication between the contractors and DOE is ongoing. Mr. Moniak asked for follow up to insure that SR wasn't "banking on" this incentive money.

### ***Americium Curium Project***

Troy Donahue, Sludge batch 3 project manager, then updated the group on the Americium Curium (Am/Cm) Disposition and on a path forward for the Am/Cm transfer. The program goals are to safely reduce risk by transferring the AmCm material from F-Canyon to tank 51H for early immobilization in the Defense Waste Processing Facility. He outlined the transfers from the canyons to Sludge batch 3 in H tank farm and eventually to DWPF. He explained the AmCm transfer interface schedule and pointed out that F-canyon would be ready for the transfer by December 15, 2002. WSRC is ahead of the DOE March 30, 2003, commitment date for the transfer.

Mr. Donahue pointed out that before the transfer of Am/Cm from F-Canyon to Tank 51 by January, several activities must take place. An Authorization Basis change implementation (Tank Farms) and a Neutralization Readiness Assessment (F canyon) are in progress. A Waste Header 3 flow test has been successfully completed and an integrated cold run with 8,000 gallons of simulant is planned. A transfer Readiness Assessment by both WSRC and DOE is planned. Finally the Am/Cm material must be neutralized.

Mr. Donahue pointed out that the estimated costs of the project have come down. The estimated project cost at completion is 12 million dollars for High Level Waste with a total project cost of 16 million. In summary, Mr. Donahue pointed out that the project modifications were installed within budget and funding, and the transfer to HLW is on schedule with no foreseeable delays.

Mr. Poe expressed concern about the safety of the process and wants proof that SR isn't going to contaminate the environment. He is not convinced that every aspect of the transfer has been studied from a risk and safety stance. He asked for the Safety Analysis Report (SAR) changes and the Safety Evaluation Report (SER). Mr. Willoughby asked that these documents be coordinated through the WMC. Mr. Moniak would like to see a Technical Risk Assessment, as well.

The meeting adjourned at 4:15 p.m. Meeting handouts may be obtained by calling 1-800-249-8155.